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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,292	12/15/2003	Nobutaka Takeuchi	246664US2	1779
22850	7590	08/31/2005		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER CHEN, SOPHIA S	
			ART UNIT 2852	PAPER NUMBER

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,292

Applicant(s)

TAKEUCHI ET AL.

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
4a) Of the above claim(s) 1-26 is/are withdrawn from consideration.
5) ☒ Claim(s) 27-45 is/are allowed.
6) ☐ Claim(s) _____ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/15/04, 12/8/04, & 8/8/05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Election of Species

1. Applicant's election with traverse filed 8/8/05 is acknowledged. The traversal is on the ground(s) that a search and examination of the entire application would not place a serious burden on the Examiner.

This is not found persuasive because of the following reasons: MPEP 808.01(a) states “--- Since the claims are directed to independent inventions, restriction is proper pursuant to 35 U.S.C. 121, and it not necessary to show a separate status in the art or separate classification (emphasis added)”. Also, it would require the examiner to search in many different subclasses based on so many different independent claims (9 of them). For example, Species I discloses the various conditions different in the inter-pole angles and the stationary layer angles from each other. Species III discloses the coating ratio. They are mutually exclusive because Species I disclose the relative angles of the magnetic poles but not in Species III. Therefore, the Examiner strongly believes that it would place a serious burden on the Examiner if the Examiner has to search the entire application.

The requirement is still deemed proper and is therefore made **FINAL**.

Ex Parte Quayle

2. This application is in condition for allowance except for the following formal matters:

Drawings

3. The drawings are objected to because the reference numeral "2" of Figures 12A and 12B should be labeled as "41". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because of the following informalities:

a. Reference character "C" has been used to designate "a nonmagnetic casing" (page 37, line 13, etc.; Figures 12A and 12B), "urea modified polyester-base

resin" (page 38, lines 23-24, etc.), and "a developing zone" (page 67, lines 15-16, etc.; Figures 19 and 20).

b. Reference character "A" has been used to designate "a developing zone" (page 22, line 5, etc.; Figure 4), "a polyester-base prepolymer" (page 38, lines 13, etc.), and "the amount of scoop-up" (page 74, line 5, etc.; Figure 21).

c. Reference character "B" has been used to designate both "an image transfer position" (page 22, line 10 and Figure 4) and "a monoamine" (page 38, line 21, etc.).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because of the following informalities:

a. The abstract includes a legal phraseology "means" (page 101, line 2).

b. The abstract exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities:

- a. Page 23, line 12, "2Y" should be "5Y".
- b. Page 24, line 23, "41" should be "41Y".
- c. Page 24, line 24, "40e" should be "40a".
- d. Page 25, line 1, "43" and "44" should be "43Y" and "44Y", respectively.
- e. Page 25, line 3, "46" and "45" should be "46Y" and "45Y", respectively.
- f. Page 25, line 4, "41" should be "41Y".
- g. Page 25, line 11, "42Y" should be "41Y".
- h. Page 25, line 21, "42Y" should be "41Y".
- i. Page 25, line 25, "42Y" should be "41Y".
- j. Page 34, line 1, "1" should be " θ 1".
- k. Page 34, line 4, "1" should be " θ 1".
- l. Page 34, line 5, "d" should be " θ d".
- m. Page 34, line 12, "XB" should be " θ d".
- n. Page 43, line 14, "2" should be "41".
- o. Page 43, line 16, "2" should be "41".
- p. Page 71, line 11, " $M=aA+a$ " should be " $M=aA+\beta$ ".

Appropriate correction is required.

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

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requested in correcting any errors of which applicant may become aware in the specification.

Claim

8. Claim 45 contains the following informality: line 4, "said developing device" should be "said process cartridge".

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Allowable Subject Matter

9. Claims 27-45 are allowable over the prior art of record.

10. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach or suggest a developing device comprising an apparent coating ratio M of a surface of the developer carrier coated with the developer (emphasis added) is, in a zone upstream (emphasis added) of the developing zone in a direction of rotation of the developer carrier, expressed as: $M = \alpha A + \beta$ (%), and the coating ratio M is between 90% and 120%.

Citation of Pertinent Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hosaka et al. (US Pat. No. 5,708,940) discloses a developing device comprising a developing roller without (emphasis added) a magnet; a one-component non-magnetic toner (no carrier, emphasis added); and a coating ratio of the toner (no developer, emphasis added) on the developing roller being equal to or less than 1.

Kikuchi (US Pat. No. 5,991,587) discloses a developing device comprising a toner having an average diameter of about 7 μm and using a polyester resin as a main binder.

Emoto et al. (US Pat. Pub. No. US 2003/0027074 A1) discloses a toner being prepared by dissolving or dispersing a toner composition that contains at least a modified polyester resin and a colorant, in an organic solvent followed by granulating the composition in an aqueous medium.

Yagi et al. (US Pat. Pub. No. US 2003/0138717 A1) discloses a toner being prepared by dissolving or dispersing a toner composition that contains at least a modified polyester resin in an organic solvent.

Yamashita et al. (US Pat. Pub. No. US 2003/0219669 A1) discloses a developing device comprising a developing roller, a magnet, and a toner having a modified polyester resin.

Tomita et al. (US Pat. Pub. No. US 2004/0053154 A1) discloses a toner being prepared by dissolving or dispersing a toner composition that contains at least a

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modified polyester resin and a colorant, in water; the polyester resin being modified by urea bonds; the toner having a volume average particle diameter of $3\ \mu\text{m}$ to $7\ \mu\text{m}$; and D_v/D_n is 1.01 to 1.25.

Tomita et al. (US Pat. Pub. No. US 2004/0157146 A1) discloses a toner being prepared by dissolving or dispersing a toner composition that contains at least a modified polyester resin and a colorant, in organic solvent; the polyester resin being modified by urea bonds; the toner having a volume average particle diameter of $3\ \mu\text{m}$ to $7\ \mu\text{m}$; and D_v/D_n is from 1.00 to 1.25.

Nanya et al. (US Pat. Pub. No. US 2004/0175641 A1) discloses a toner being prepared by dissolving or dispersing a toner composition that contains at least a modified polyester resin and a colorant, in organic solvent.

Hosaka et al. (JP 06-266221 A) discloses a developing device comprising a developing roller without a magnet, and a coating ratio of toners (not developer, emphasis added) on the developing roller being less than 1.

Sakakawa et al. (JP 09-251243 A) discloses a developing device comprising a developing roller having a magnet, and a coating ratio of the developer (emphasis added) on the developing roller being in the range of 10% to 50%.

Sakakawa et al. (JP 2001-005294 A) discloses a developing device comprising a developing roller having a magnet, and a coating ratio of the developer (emphasis added) on the developing roller being in the range of 10% to 60% in the developing area.

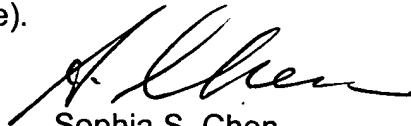
Koyama et al. (JP 2003-228229 A) discloses a developing device comprising a developing roller without (emphasis added) a magnet, and a coating ratio of the toner (not developer; emphasis added) on the developing roller being less than 100%.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sophia S. Chen
Primary Examiner
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